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DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION
INCOMING MESSAGE

USAF Declass/Release Instructions On File

ACTION: ADV

AC - PARAPHRASE NOT REQUIRED EXCEPT PRIOR TO CATEGORY B ENCRYPTION
PHYSICALLY REMOVE ALL INTERNAL REFERENCES BY DATE TIME GROUP PRIOR
TO DECLASSIFICATION NO UNCLASSIFIED REFERENCE IF THE DTG IS QUOTED
BT RJZ755 190

R 161451Z

FM COMDP ARMC ANDREWS AFB MD

TO HQ USAF WASH DC

BT

AS E C R F T/ FROM RDT 15-12-1-E

FOR LT COL ROBERT CAREY AFCIN-2B3. THIS MSGS IN TWO PARTS.

PART I. REFERENCE MEMO TO ACS/I FROM GMAIC AFCIN TSC NR380-59. IN
CONNECTION THERWITH THE FOLLOWING INFORMATION WAS RECIVED FROM THE
ASSISTANT COMMANDER FOR MISSILE TESTS AFBMD PATRICK AFB QUOTE ASSUME
CITED RUMORS ARE RESULT OF SIGHTINGS AT NIGHT OF A PHENOMENON WHICH
STARTS JUST PRIOR TO BURNOUT ON THOR AND JUMPITER FLIGHTS AND JUST
AFTER BOOSTER STAGING ON ATLAS FLIGHTS. THIS EFFECT OCCURS ON ALL
NIGHT FLIGHTS WITH AN INTENSITY ROUGHLY EQUAL TO THAT OF THE MILKY
WAY. AFTER STARTING IT IS OBSERVED OVER REMAINDER OF THE TRAJECTORY
TO BURNOUT AND THE EFFECT HAS BEEN OBSERVED TO PERSIST IN THIS VOLUME
AFTER BURNOUT. THE EFFECT IS NOT A CLOUD REFLECTING INCIDENT LIGHT

CKM BUT APPEARS TO BE RADAIION OF ENERGY IN THE VISIBLE SPECTRUM

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AFHQ: 11616 (16 Dec 59)

FROM A VOLUME OF SPACE. IT SHOULD BE NOTED THAT IT IS SUSPECTED THERE ARE 2 PHENOMENA INVOLVED CMM 1 BEING THIS DIRECT ENERGY RADIATION WHICH IS OBSERVED DURING THE NIGHT AT TIMES WHEN THE SUN COULD NOT BE ILLUMINATING THE TRAJECTORY CMM AND THE OTHER OCCURRING SHORTLY AFTER OR BEFORE TWILIGHT WHEN IT IS SUSPECTED THAT THERE IS SCATTERING OF INCIDENT SUNLIGHT FROM THE EXHAUST GAS CLOUD. THE FOLLOWING COMMENTS ARE RESTRICTED TO THE FORMER CASE WHEN VIEWED FROM CAPE CANAVERAL CMM THE PHENOMENON APPEARS AS A CORONA AROUND THE MISSILE FLAME AND SOMETIMES PERSISTS AFTER BURNOUT. WHEN VIEWED FROM THE SIDE, PHENOMENON APPEARS AS A DIFFUSION OF FAINT LUMINOSITY OUT FROM THE FLAME TRAIL BUT SEVERAL TIMES WIDER AND PERSISTING AFTER THE FLAME HAS MOVED WELL AWAY FROM A PARTICULAR POINT. THIS PERSISTENCE HAS BEEN OBSERVED TO LAST WELL OVER 30 SECONDS AFTER THE FLAME PASSED ON OR AFTER BURNOUT WHEN VIEWED FROM THE REAR. THE FOLLOWING NOTES CONCERNING THE LUMINESCENCE PHENOMENON WERE TAKEN ON THE THOR 228 LAUNCHED 5 AUG 59 CLN QUOTE STARTED ABOUT 10 SECONDS BEFORE BURNOUT WITH THE INITIAL PORTION HAVING A PERSISTENCE ESTIMATED BETWEEN 20 AND 40 SECONDS BEFORE VISUAL RECOGNITION WAS LOST UNQUOTE. THIS PARTICULAR MISSILE WAS AT AN ALTITUDE OF APPROX 238,000 FEET PAREN 73 KM PAREN WHEN THE PHENOMENON WAS FIRST OBSERVED ; BURNOUT OCCURRED AT AN ALTITUDE OF 239,000 FEET PAREN 88 KM PAREN. PRELIMINARY SEARCH OF SURVEY INFORMATION

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AF IN: 17616 (16 Dec 59) A/N/mp

ON THE ATMOSPHERE REVEALS THAT THE ALTITUDE OF THE START OF THE PHENOMENON IS IN THE UPPER PORTIONS OF THE QUOTE DELTA UNQUOTE LAYER OF THE IONOSPHERE AND, IN PARTICULAR, THE OBSERVATION FOR THIS MISSILE SHOWS THE EXISTENCE OF THE PHENOMENON IN THE RANGE OF ALTITUDE WHERE NOCTILUCENT CLOUDS OCCUR. SEVERAL CONJECTURES HAVE BEEN MADE ABOUT THE MECHANISM PRODUCING THE VISIBLE ENERGY. WE PLAN TO MAKE MORE DETAILED OBSERVATIONS ON THE NEXT FEW FLIGHTS TO ATTEMPT TO CORRELATE THE PHENOMENON WITH THE MISSILE AND MISSILE TRAJECTORY FLIGHT HISTORY END QUOTE.

PART II. RELATIVE TO PARA 3 AND 4 OF THE ABOVE REFERENCED MAIC MEMO. INQUIRIES ARE BEING MADE WITH ARDC TO DETERMINE FEASIBILITY AND, OR PRACTICABILITY OF CONDUCTING TASK DESCRIBED THEREIN

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